

CLAIMS

What is claimed is:

1. A process for coating a surface of an automotive vehicle, comprising:

a) providing a surface of an automotive vehicle;

5 b) contacting the surface to form a coating with a composition comprising:

i) A first component that includes an isocyanate component including an aliphatic isocyanate as a major portion of the isocyanate component; and

10 ii) A second component that is maintained separate from the first component until mixed in a dispenser for application to the surface, the second component including an amine,

15 wherein upon two weeks of water immersion at 32°C, or exposure to 100 % relative humidity at 38°C, the coating exhibits substantially no blistering, dulling or softening or loss of adhesion, and wherein the coating exhibits substantially no blistering, cracking or charring when sag panel tested for two weeks at about 70°C.

20 2. A process for coating a surface of an automotive vehicle bed liner, comprising:

a) providing a surface of an automotive vehicle bed liner;

b) robotically spraying the surface with a composition comprising:

25 i) A first component that includes an isocyanate including an aliphatic isocyanate as a major portion of the isocyanate component; and

30 ii) A second component that is maintained separate from the first component until mixed in a dispenser for application to the surface, the second component including an amine in an amount so that the amine and the isocyanate are present in an amount of about 1:10 to about 10:1 parts by volume.

3. A process for coating a surface of an automotive vehicle bed liner, comprising:

- a) providing a surface of an automotive vehicle bed liner;
- b) robotically spraying the surface with a composition comprising:

- 5 i) A first component that includes an isocyanate component including an aliphatic isocyanate as a major portion of the isocyanate component; and
- ii) A second component that is maintained separate from the first component until mixed in a dispenser for application to
10 the surface, the second component including a secondary amine that is a aspartic acid ester in an amount so that the amine and the isocyanate are present in an amount of about 1:10 to about 10:1 parts by volume.

15 4. A process as in claim 1 wherein the isocyanate is present in the composition from about 30% to about 70% by volume and is at least 90% aliphatic by weight.

20 5. A process as in claim 1 wherein the second component includes at least 40% of an aspartic acid ester by weight.

25 6. A process as in claim 1 wherein the composition is contacted with the substrate using an apparatus having a first metering container for receiving the second component, a second metering container for receiving the first component and a nozzle in fluid communication with the first and second containers for spraying the resulting composition.

30 7. A process as in claim 1 further comprising adding into the composition a light stabilizer for assisting the coating in resisting degradation due to exposure to light.

8. A process as in claim 1 further comprising adding into the composition an effective amount of an agent for controlling static.

9. A process as in claim 1 further comprising adding into the composition a thixotropic agent.

10. A process as in claim 1 wherein at least a portion of the isocyanate
5 component is selected from the group consisting of dicyclohexylmethane 4,4'-diisocyanate, isophorone diisocyanate, tetramethyl-1,3-xylylene diisocyanate, hexamethylene diisocyanate.

11. A process as in claim 2 wherein the resulting coating exhibits
10 substantially no blistering, cracking or charring when sag panel tested for two weeks at about 70° C.

12. A process as in claim 2 wherein upon two weeks of water immersion at 32°C, or exposure to 100 % relative humidity at 38°C, the coating exhibits
15 substantially no blistering, dulling or softening or loss of adhesion, and wherein the coating exhibits substantially no blistering, cracking or charring when sag panel tested for two weeks at about 70°C.

13. A process as in claim 2 wherein the second component includes at
20 least 40% of an aspartic acid ester by weight.

14. A process as in claim 13 wherein at least a portion of the isocyanate component is selected from the group consisting of dicyclohexylmethane 4,4'-diisocyanate, isophorone diisocyanate, tetramethyl-1,3-xylylene diisocyanate,
25 hexamethylene diisocyanate.

15. A process as in claim 14, wherein the composition further includes a polyoxyalkylenamine.

16. A process as in claim 14 further comprising adding into the composition
30 an effective amount of an agent for controlling static.

17. A process as in claim 3 wherein at least a portion of the isocyanate component is selected from the group consisting of dicyclohexylmethane 4,4'-diisocyanate, isophorone diisocyanate, tetramethyl-1,3-xylylene diisocyanate, hexamethylene diisocyanate.

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18. A process as in claim 3 further comprising adding into the composition an effective amount of an agent for controlling static.

19. A process as in claim 3 wherein the automotive vehicle is a pick-up truck,

the composition further includes an agent for controlling static, and
the composition is contacted with the substrate using an apparatus having a first metering container for receiving the second component, a second metering container for receiving the first component and a nozzle in fluid communication with the first and second containers for spraying the resulting composition.

20. A process as in claim 3 wherein the composition further includes a polyoxyalkylenamine, and one or more additional ingredients for functioning as a catalyst, stabilizer, pigment, fire retardant or other performance or property modifier.

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